ABSTRACT OF THE DISCLOSURE

A system has a plurality of nodes communicating with each other on a serial data path using dominant and recessive signal levels. A dominant signal level sent on the data path by any of the nodes creates a dominant signal level on the data path irrespective of the number of recessive signal levels sent by other nodes. The dominant and recessive signal levels form a series of bits organized into messages by the nodes. Each sending node senses the signal level on the data path bit by bit, and if different from that sent by that sending node, halts further sending of signal levels by that sending node. A priority value generator in each node provides a priority signal encoding a value whose magnitude indicates a relative priority. A message priority module in each node receives the priority signal, and stores the priority value in predetermined leading bits of the message to be sent.